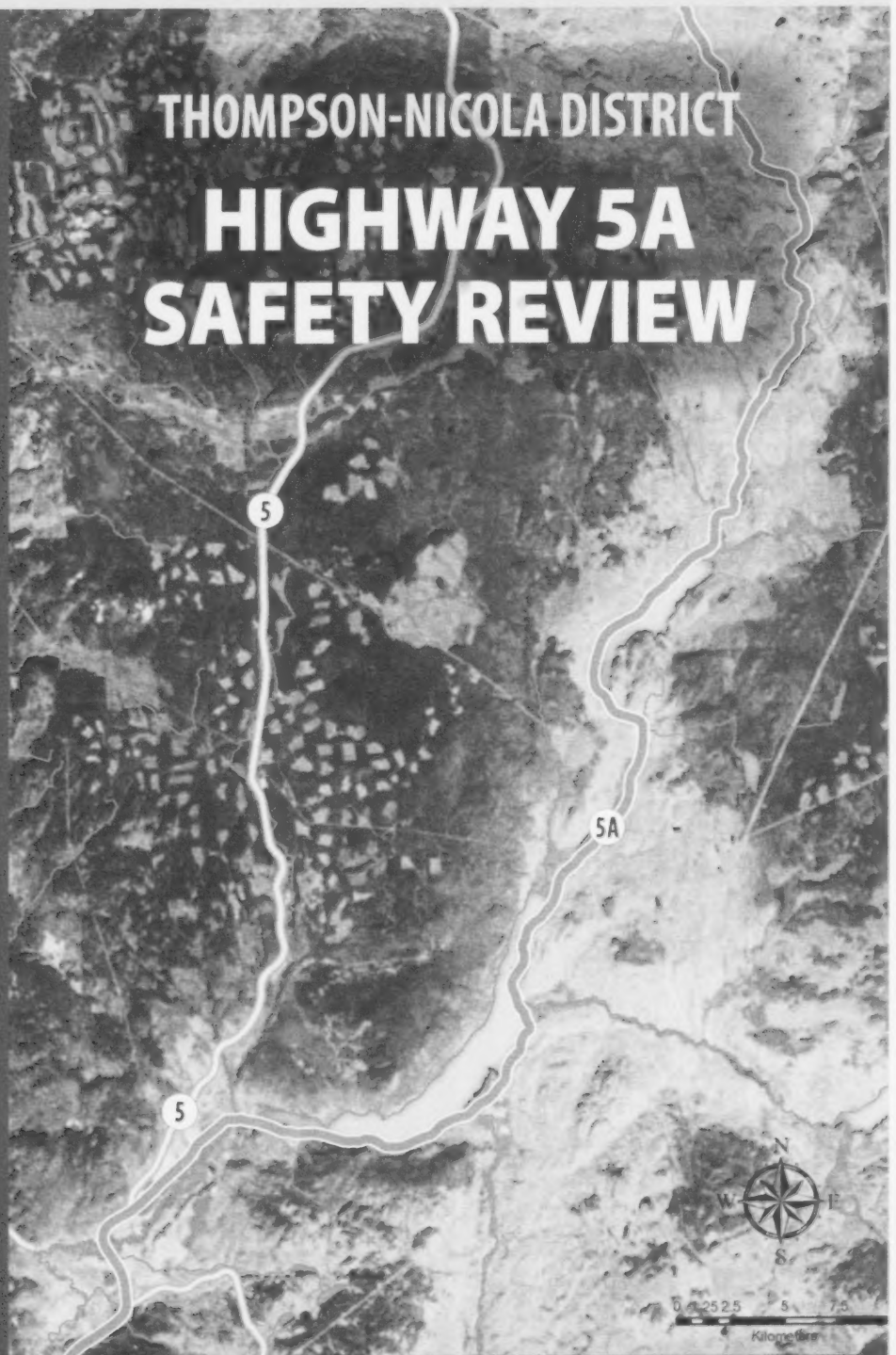


THOMPSON-NICOLA DISTRICT HIGHWAY 5A SAFETY REVIEW



Ministry of
Transportation
and Infrastructure

THOMPSON-NICOLA DISTRICT

HIGHWAY 5A SAFETY REVIEW

July 11, 2013

Prepared for:

Honourable Minister Todd Stone
Ministry of Transportation and Infrastructure

Prepared by:

Paula Cousins, District Manager
Ministry of Transportation and Infrastructure
Thompson-Nicola District
127 - 447 Columbia Street
Kamloops, BC V2C 2T3



Ministry of
Transportation
and Infrastructure

1.0 INTRODUCTION	1
2.0 BACKGROUND	4
2.1 Highway 5A - Merritt to Kamloops.....	4
2.2 Physical Improvements.....	6
2.3 Enhanced Enforcement Activities.....	8
2.4 Outcomes	9
3.0 NEXT STEPS	13
4.0 APPENDIX – ADDITIONAL COLLISION DATA	15

1.0 INTRODUCTION

In 2010, after several vehicle incidents the ministry implemented a number of safety improvements as well as a targeted enforcement campaign. The province received a petition from local residents in March 2013, requesting that the ministry ban non-local commercial vehicles from Highway 5A between Merritt and Kamloops. In response, the ministry initiated this review to assess the effectiveness of the actions taken since 2010. Furthermore, the report includes a discussion of the next steps for further highway improvement. This document will outline past and future investment, enforcement and statistics related to commercial vehicle use and safety.

Highway 5A originates at the Highway 3 intersection in Princeton, continues north for 86 km to Merritt. It then travels a further 88 km north (84 km under MoTI jurisdiction) through the rolling grasslands and ranches of the Nicola Valley to Kamloops. The section of highway between Merritt and Kamloops is the focus of this document.

Key stakeholders in the Nicola Valley include ranchers, forest companies and local residents. Highway 5A is a critical link in the transportation network for the Southern Interior Region. Agriculture and logging activities along the corridor are important to the regional economy, and local businesses rely on highway traffic—particularly a Husky Truck stop at Merritt. Highway 5A also serves as an alternate low elevation route when Highway 5 is closed.

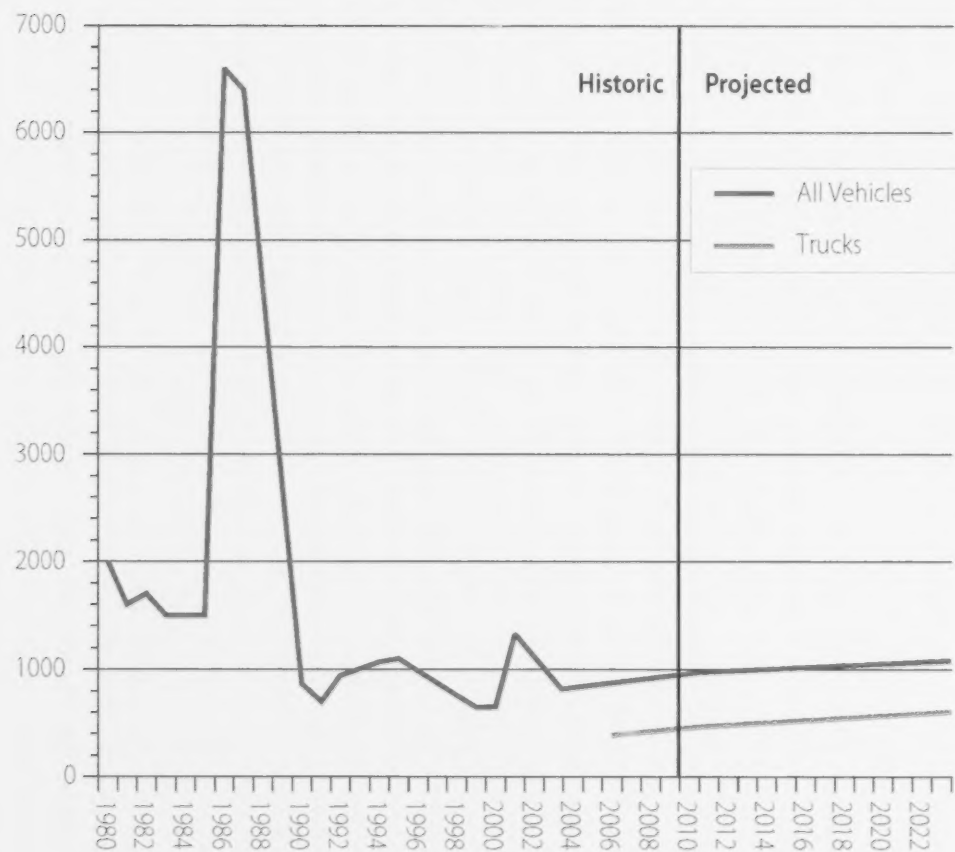


Nearly 1,000 vehicles per day including approximately 350 commercial vehicles, utilize the corridor. Current traffic volumes are below those of the early 1980's when Highway 5A was the primary route for all traffic between Merritt and Kamloops.

The Coquihalla Highway between Merritt and Kamloops averages approximately 9,000 vehicles per day including approximately 1,500 commercial vehicles.

The dramatic increase noted below in 1986 coincides with the completion of the Coquihalla Highway between Hope and Merritt and the use of Highway 5A for Kamloops bound traffic until the second phase of the Coquihalla was completed in 1988.

**Highway 5A Traffic Volumes
Stump Lake Road**



2.0 BACKGROUND

2.1 Highway 5A - Merritt to Kamloops

In recent years, some stakeholders, including local residents and ranchers, have expressed concern with commercial trucks using Highway 5A instead of the Coquihalla Highway. While traffic volumes on Highway 5A are relatively low and congestion is not a major issue, most of the stakeholder concerns are focussed on safety and driver behaviour.

On April 28, 2010, there was a collision involving two semitrailer units and a pickup truck on Highway 5A by Nicola Lake. The next day, a lumber truck lost its load near Shumway Lake. On April 30, 2010 a truck hauling food by-products rolled near Shumway Lake.



Knutsford Brake Check



Paving on Highway 5A

In response to the incidents and the public concern that followed, the Ministry established a multidisciplinary team in 2010—with members from the BC Trucking Association (BCTA), ICBC, RCMP, Trucking Safety Council of BC and WorkSafe BC—to develop and implement a plan to improve safety along Highway 5A. The team identified highway safety improvement priorities and recommended an increased education and enforcement strategy to ensure commercial vehicle operators adhere to the posted speed advisories and drive according to road conditions.

The actions coming from the multi-disciplinary team included various physical safety improvements and enforcement activities which are included in section 2.2 and 2.3.

2.2 Physical Improvements

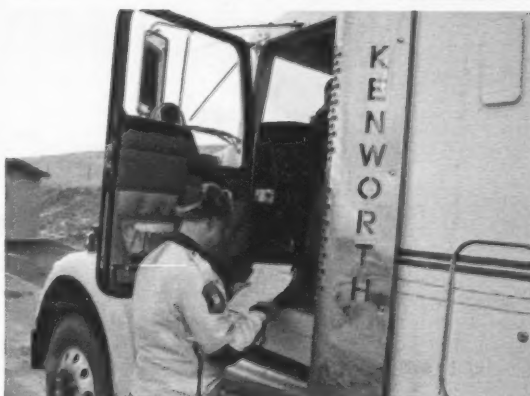
The ministry recognizes the importance of this highway, and has invested over \$9.5 million since 2001 to improve safety for all users. Recent improvements include:

- Installation of a high visibility, LED curve warning sign that measures vehicle speed and lights up to warn speeding drivers to slow down northbound at Shumway Curves (2010).
- Installation of two permanent speed reader boards located southbound at the south end of Shumway Lake and northbound at Droppingwater Creek (2010).
- Completion of an engineering assessment (ball bank testing) along the entire corridor to determine the appropriate warning signs and suggested speed limits for corners. This resulted in the replacement of all 279 regulatory and warning signs to new reflectivity standards. In some locations, oversize signs were installed to increase driver awareness (2010/ 2011).
- Installation of 200 high visibility delineators on corners throughout the corridor, and eight new Truck Tipping signs on high-hazard corners (2010).
- Placement of Gateway Speed signs at the start of the corridor to alert drivers that the road ahead is winding, and to slow down (2010).



Highway 5A Gateway Sign

- Traffic calming line marking installed at Trapp Lake Bluffs. This line marking creates the perception that speed is increasing as the driver approaches the corner and that the lane is narrower than it actually is. This has the outcome of slowing the driver (2011).
- Placement of 150 m of additional concrete roadside barrier at high risk locations such as curves or high embankments (2011).
- Construction of a northbound brake check in Knutsford which also provides a safe location for CVSE inspections and joint road checks (2008).
- Completion of 34 km of resurfacing (2008 to present).
- Installation of 43 km of centre line rumble strips—which serve to delineate the roadway in adverse conditions (2008 to present).



*Speed Activated Curve Warning Sign, Truck Tipping Sign,
CVSE Enforcement at Knutsford Brake Check*

2.3 Enhanced Enforcement Activities

The ministry's Commercial Vehicle Safety Enforcement (CVSE) program is responsible for the safety of commercial vehicles on provincial roadways. This includes the enforcement of moving violations (i.e. speed) and mechanical inspections.

Over recent years, patrols and enforcement efforts have been increased significantly along this corridor. In 2010, the Ministry completed detailed traffic counts which assists CVSE to focus their monitoring efforts to target the days/times with the highest volumes of commercial vehicle traffic.

Since spring 2010:

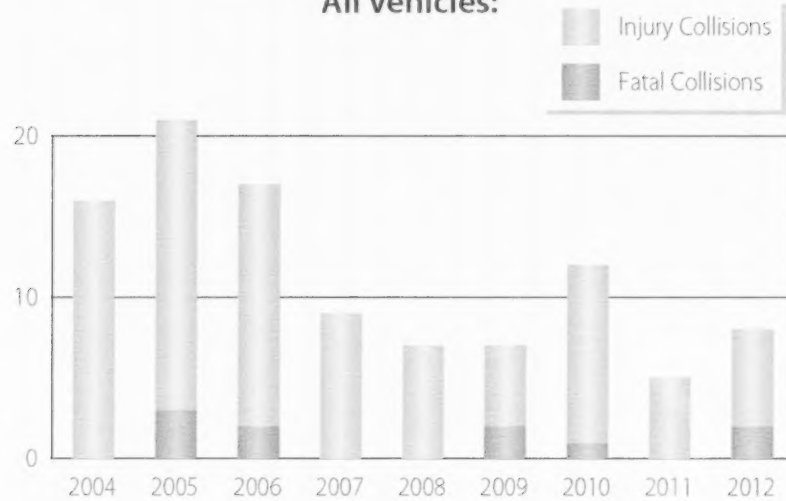
- CVSE patrols Highway 5A an average of 15 days per month
- 11,297 commercial vehicles have been checked
- 330 detailed inspections have been completed
- 1,720 notice and order warnings have been issued (e.g. damaged windshield, burned out tail-light)
- 1,355 violation tickets have been issued including;
 - 620 speeding
 - 61 overweight
 - 143 log book infractions
 - 69 defective vehicles
 - 38 insecure loads
 - 24 brake infractions

With this increased enforcement and CVSE presence on Highway 5A, the commercial trucking industry has clearly received the message that the ministry's number one priority on Highway 5A is safety.

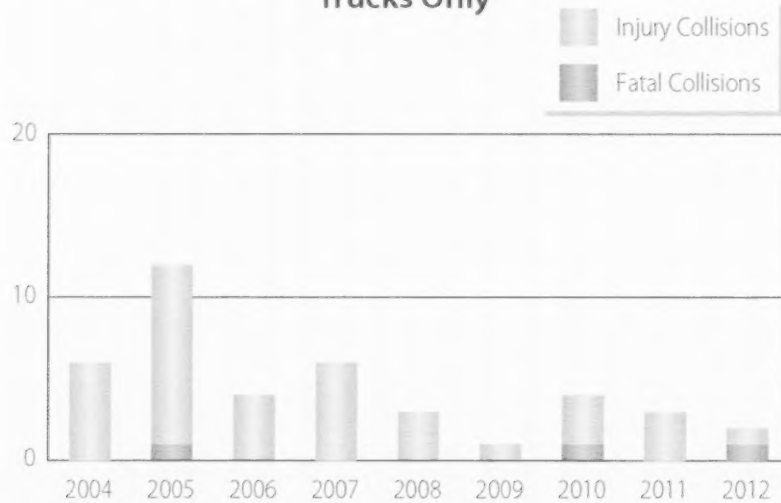
2.4 Outcomes

Crash statistics on Highway 5A show a declining trend in the number of serious and fatal crashes.

**Total Serious Collisions by Year:
All Vehicles:**



**Total Serious Collisions by Year:
Trucks Only**



Since the majority of improvements were undertaken in 2010 and 2011, serious and fatal collisions have continued to decline, particularly at locations targeted for improvement. In the two years leading up to the improvements (May 2008 – May 2010), a total of 21 vehicles were involved in serious crashes (fatality or injury). In the 2 years since the improvements (February 2011 – February 2013), there were 12 vehicles involved in a serious crash. A similar trend in the commercial vehicles was also seen with a 50% reduction in crashes—from 8 serious crashes preceding the improvements to 4 serious crashes after. The graphs on the next two pages show the locations of these crashes along the corridor.

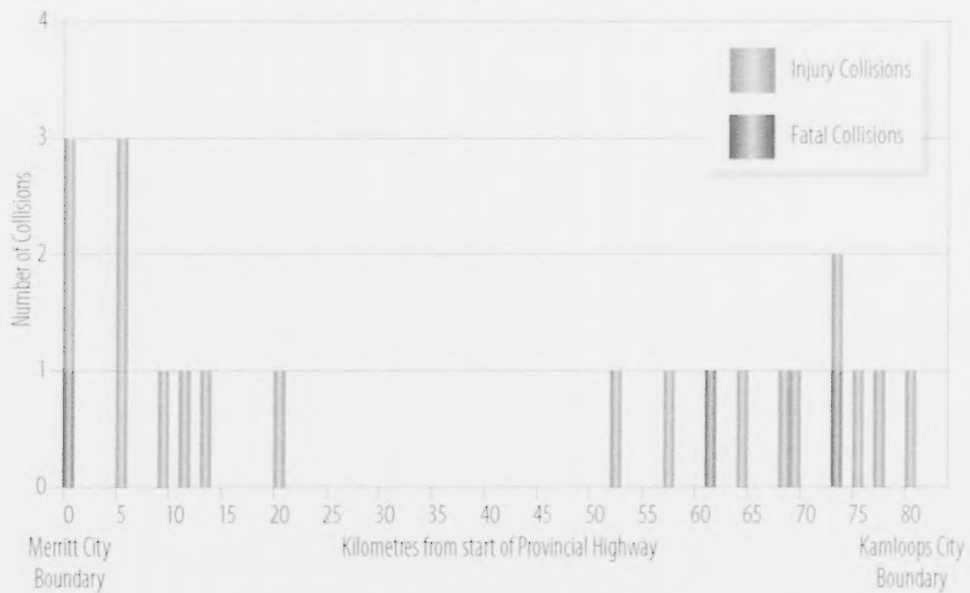
A review of enforcement data also indicates that the ministry's efforts are resulting in lower speeds along the corridor with a nearly 70% reduction over the past two years. Summary statistics between 2010 and 2012 are as follows:

- 2010 – 0.47 speeding tickets per hour of enforcement
- 2011 – 0.30 speeding tickets per hour of enforcement
- 2012 – 0.15 speeding tickets per hour of enforcement

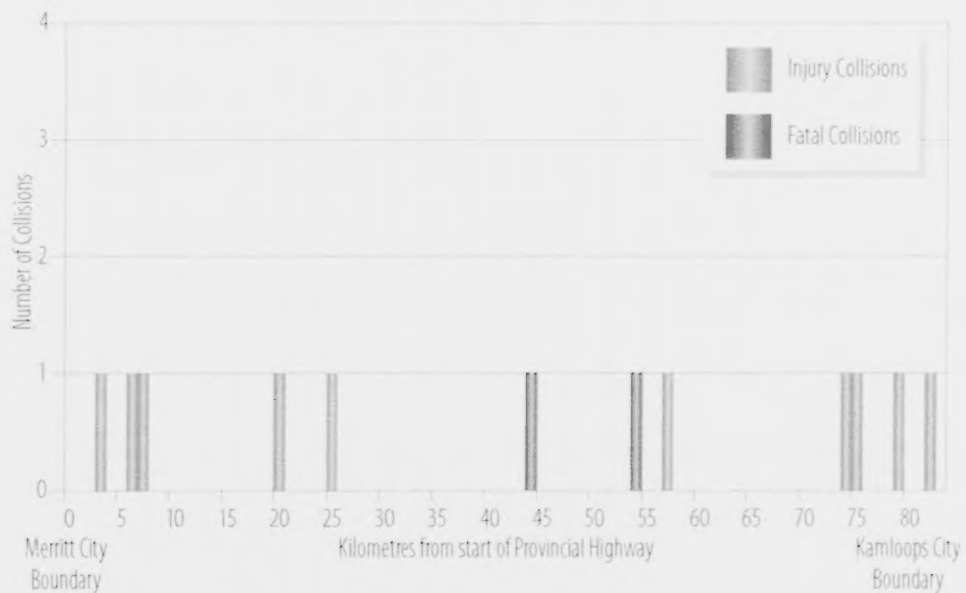


CVSE enforcement at Knutsford Brake Check

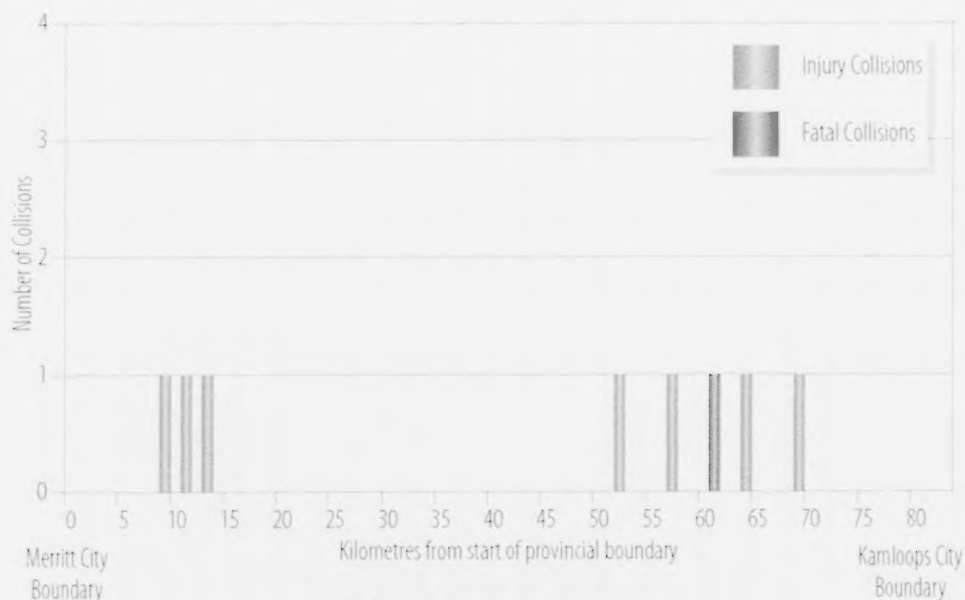
**May 2008 – May 2010
Serious Collisions: All Vehicles**



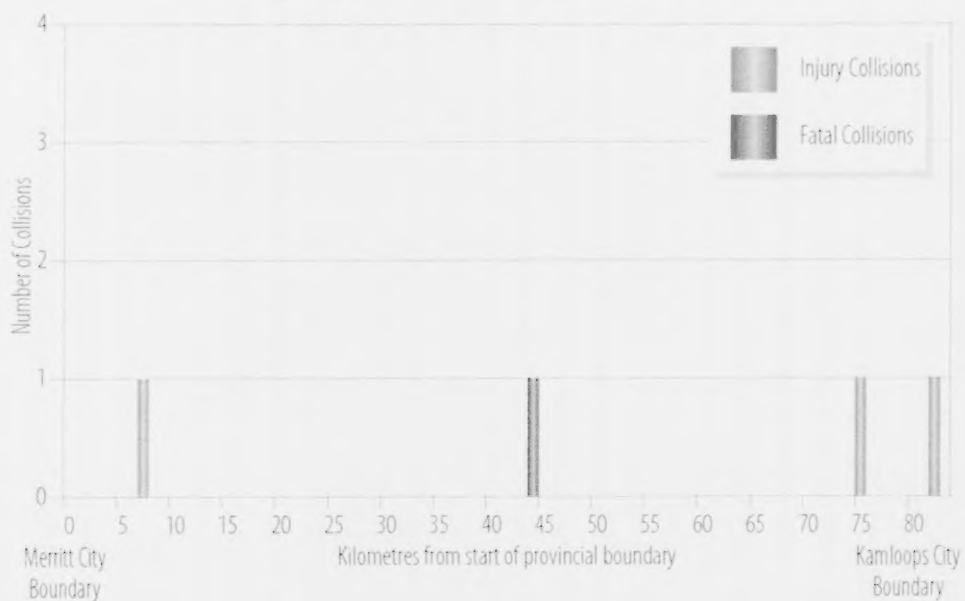
**February 2011 – February 2013
Serious Collisions: All Vehicles**



**May 2008 – May 2010
Serious Collisions: Trucks Only**



**Feb 2011 – Feb 2013
Serious Collisions: Trucks Only**



3.0 NEXT STEPS

Since 2010, statistics indicate that safety has improved on Highway 5A with significant decreases in the number of commercial vehicles crashes and speeding. The Ministry has additional plans for highway improvements and increased enforcement activities.

These include:

- Completion of another 11 km of resurfacing from Peterhope Lake Road to Stump Lake
- Installation of LED chevrons at Droppingwater Creek Curves. These solar-powered chevrons light up at night and provide a very visible indication of the curve alignment.
- Installation of two additional speed activated, LED curve warning signs at the south end of Highway 5A, near Nicola Lake.
- The Ministry has recently acquired property across from the northbound brake check in Knutsford. An illuminated pull-out with sufficient room for five commercial vehicles is planned for construction in 2014, subject to ALR approval. This will provide CVSE staff with a safe location to undertake inspections on southbound commercial vehicles.
- Upon completion of the southbound pullout in Knutsford, CVSE will host a multi-day, multi-agency road check for both directions, followed by minimum monthly road checks at random dates and times.
- The Ministry is also working to acquire property to construct two additional CVSE pullouts along the route that are strategically located, to provide safe and effective enforcement opportunities.
- CVSE will continue to monitor and patrol Hwy 5A on a priority basis, increasing their patrols to an average of 20 days per month, up from 15.
- A CVSE ghost car is going into service in the Thompson Nicola area and will focus patrols on Highway 5A.

- * Detailed traffic counts will be updated in Summer 2013 to assist with enforcement activity planning and to provide data on commercial vehicle origin and destination.

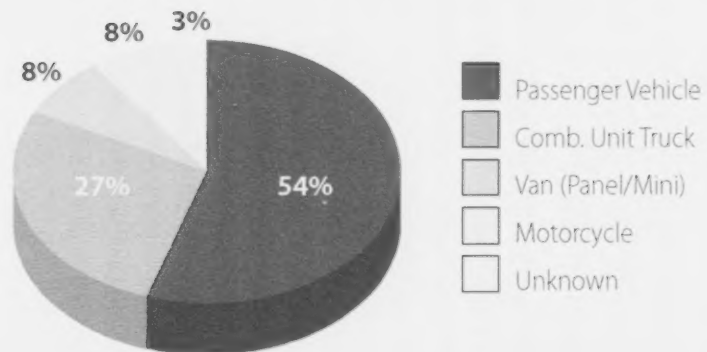
As noted earlier, there has been significant public interest and concern with the use of Highway 5A by commercial vehicles. Some stakeholders have asked that the ministry ban commercial vehicles or introduce differential speeds for commercial vehicles. To date, this has not been pursued for the following reasons:

- * The ministry's safety improvements efforts to date are working, and more safety improvements and increased enforcement are planned.
- * There is a significant amount of commercial vehicle traffic generated along Highway 5A both from the logging industry and the agricultural industry. It would be challenging to differentiate between a local commercial vehicle and a non-local one. This would require significant additional administrative and enforcement efforts.
- * This route is used as the alternative route when the Coquihalla Highway is closed between Kamloops and Merritt.
- * The movement of goods in British Columbia is a key component of our economy and creating restrictions could create significant cost pressures and time delays for industry.
- * Differential speeds are a known contributing factor in crashes. Increased driver frustration could result, as passenger vehicles are following slower moving trucks. The result could be more vehicle platooning and more high risk passing maneuvers occurring, as passenger vehicles try to get around the trucks.
- * The only current locations with a "truck speed limit" are locations with more than 2 lanes in each direction so the driver frustration is lessened.
- * An artificially slow speed limit typically has poor compliance and breeds a general disrespect of all speed limits.

4.0 APPENDIX – ADDITIONAL COLLISION DATA

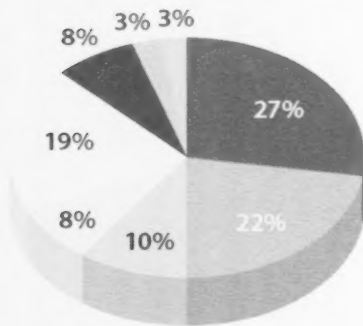
The majority of collisions involve passenger vehicles (51%), followed by commercial vehicles (35%).

**Primary Vehicle Involved in Collision
2008–2012**



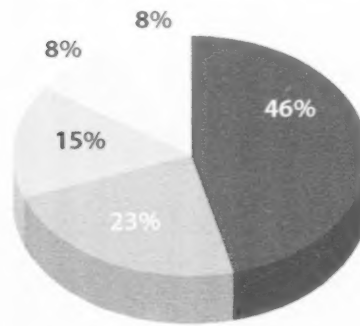
The primary contributing factor for crashes in the corridor is human factors such as driver inattentiveness and driving too fast for road conditions.

**Primary Contributing Factor
All Collisions 2008–2012**



- Driver Inattentive
- Other Human Factors
- Driving Too Fast for Condition
- Fell Asleep
- Drugs Suspected
- Other Unknown
- Road Condition
- Wild Animal/Domestic Animal

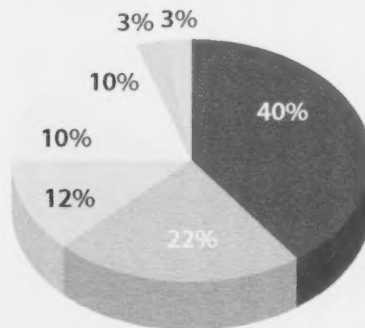
**Primary Contributing Factor
Truck Collisions 2008–2012**



- Driver Inattentive
- Driving Too Fast for Condition
- Fell Asleep
- Drugs Suspected
- Other

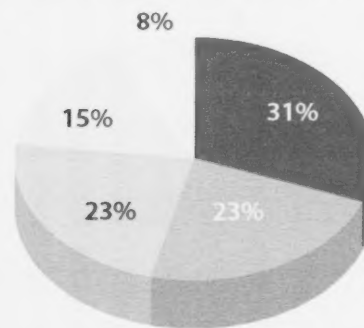
The most frequent type of incident is vehicles going off the road to the right.

**Primary Occurrence
All Collisions 2008–2012**



- Off road right
- Off road left
- Other
- Head on
- Side Swipe
- Rear end
- Unknown

**Primary Occurrence
Truck Collections 2008–2012**



- Off road right
- Side Swipe
- Head on
- Off road left
- Other/Unknown

